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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,067	12/21/2001	David E. Clune	Clune 3-4-18	5463

29391 7590 11/17/2005

BEUSSE BROWNLEE WOLTER MORA & MAIRE, P. A.
390 NORTH ORANGE AVENUE
SUITE 2500
ORLANDO, FL 32801

EXAMINER	
NEURAUTER, GEORGE C	

ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/037,067	CLUNE ET AL.	
	Examiner	Art Unit	
	George C. Neurauter, Jr.	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-15 are currently presented and have been examined.

Response to Arguments

Applicant's arguments filed 11 October 2005 have been fully considered but they are not persuasive.

The Applicant argues that Bonomi does not disclose identifying destination nodes for a multicast session as claimed by the Applicant. The recitation has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

The Applicant argues that Bonomi does not disclose wherein each node entry has an associated address for receiving multicast data. Bonomi does disclose these limitations (column 10, line 61-column 11, line 35)

The Applicant argues that Bonomi does not disclose traversing the linked list for sending the multicast data to the

destination nodes. As noted previously, Bonomi does disclose this limitation (column 13, lines 46-60)

The Applicant argues that there is no motivation to combine the references. The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Knuth expressly discloses that a circularly linked list has the distinct advantage of being able to access the list starting at any point. In view of this motivation, one of ordinary skill in the art would have been motivated to combine the teachings of the references in order to use the circularly linked list of Knuth in place of the linked list of Bonomi in order to achieve the claimed invention. Since the references are directed to traversing linked lists or queues and entering a linked list at a given point, one of ordinary skill would reasonably expect a successful combination of the teachings of these references. Therefore, the Examiner has properly established a *prima facie* case of obviousness.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that

was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6 219 352 to Bonomi et al in view of "The Art of Computer Programming: 2nd Edition" to Knuth.

Regarding claim 1, Bonomi discloses a method for identifying destination nodes of a multicast session in a network having a plurality of nodes, comprising: forming a linked list ("queue") comprising a plurality of destination node entries each node entry having an associated address for receiving multicast data; identifying an address ("head pointer") for entering the list at an initial destination node entry; traversing the linked list for sending the multicast data to the destination nodes; and terminating the traversing step prior to reaching the initial destination node entry (at the "tail pointer"). (column 10, line 61-column 11, line 35; column 13, lines 40-column 14, line 2, specifically column 13, lines 46-60)

Bonomi does not expressly disclose a circularly linked list, however, Knuth does disclose a circularly linked list (page 270, section 2.2.4 "Circular Lists", specifically "A

circularly-linked list...has the property that its last node links back to the first...It is then possible to access all of the list starting at any given point")

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of these references since Knuth discloses that using a circularly linked list allows for entry into the list at any point (page 270, section 2.2.4 "Circular Lists", specifically "It is then possible to access all of the list starting at any given point"). In view of these specific advantages and that the references are directed to traversing linked lists or queues and entering a linked list at a given point, one of ordinary skill would have been motivated to combine these references and would have considered them to be analogous to one another based on their related fields of endeavor.

Regarding claim 2, Bonomi and Knuth disclose the method of claim 1.

Bonomi discloses the method further comprising receiving data intended for transmittal to the identified destination nodes of the multicast session. (Figure 2, step 220; column 7, line 54-column 8, line 36, specifically column 7, lines 56-61; column 13, lines 46-48)

Regarding claim 3, Bonomi and Knuth disclose the method of claim 2.

Bonomi discloses wherein the initial destination node entry is determined from the received data. (column 10, lines 12-60, specifically lines 16-22; column 11, lines 18-47).

Regarding claim 4, Bonomi and Knuth disclose the method of claim 2.

Bonomi discloses wherein at least one destination node of the list, as determined from the received data, is excluded from the multicast session. (column 14, lines 17-25).

Regarding claim 5, Bonomi and Knuth disclose the method of claim 4.

Bonomi discloses wherein the received data includes an indicator identifying the destination node that is to be excluded from the multicast session. (column 14, lines 17-25)

Regarding claim 6, Bonomi and Knuth disclose the method of claim 5.

Bonomi discloses wherein the indicator identifies the destination node from which the data was received as the destination node to be excluded from the multicast session. (column 2, lines 45-67; column 14, lines 17-25).

Regarding claim 7, Bonomi and Knuth disclose the method of claim 1.

Bonomi discloses wherein the initial destination node entry is predetermined (column 13, lines 40-column 14, line 2, specifically column 13, lines 52-55)

Regarding claim 8, Bonomi and Knuth disclose the method of claim 1.

Bonomi discloses the method further comprising receiving data intended for transmittal to the identified destination nodes of the multicast session on an input port, and wherein the initial destination node entry is determined based on the input port. (column 10, lines 12-60, specifically lines 16-22; column 11, lines 18-47; column 14, lines 47-58)

Regarding claim 9, Bonomi and Knuth disclose the method of claim 1.

Bonomi discloses wherein the address for entering the list is the destination node from which the data was received. (column 10, lines 12-60, specifically lines 16-22; column 11, lines 18-47)

Regarding claim 10, Bonomi and Knuth disclose The method of claim 1.

Bonomi discloses wherein the traversed destination node entries are the identified destination nodes of the multicast session. (column 13, lines 46-60)

Regarding claim 11, Bonomi and Knuth disclose the method of claim 1 wherein destination node entries for a plurality of multicast sessions are interleaved in a list, and wherein the destination node entries for each one of the plurality of multicast sessions are linked. (column 13, lines 18-25)

Bonomi does not expressly disclose a circularly linked list, however, Knuth does disclose this limitation (page 270, section 2.2.4 "Circular Lists", specifically "A circularly-linked list...has the property that its last node links back to the first...It is then possible to access all of the list starting at any given point").

Claim 11 is rejected since the motivations regarding the obviousness of claim 1 also apply to claim 11.

Regarding claim 12, Bonomi and Knuth disclose the method of claim 1.

Bonomi discloses wherein each destination node entry includes link information ("memory address"), and wherein the step of traversing the linked list comprises traversing the linked list according to the link information at each destination node entry. (column 10, lines 12-60, specifically lines 16-22; column 11, lines 18-47; column 13, lines 40-column 14, line 2, specifically column 13, lines 46-60)

Regarding claim 13, Bonomi and Knuth disclose the method of claim 12.

Bonomi discloses wherein the link information comprises a pointer at each destination node entry that points to another destination node entry such that the plurality of destination node entries are linked.

Bonomi does not disclose wherein the destination node entries are circularly linked, however, Knuth does disclose wherein entries are circularly linked (page 270, section 2.2.4 "Circular Lists", specifically "A circularly-linked list...has the property that its last node links back to the first...It is then possible to access all of the list starting at any given point").

Claim 13 is rejected since the motivations regarding the obviousness of claim 1 also apply to claim 11.

Claim 14 is rejected since claim 14 recites a method that contains substantially the same limitations as recited in claims 1 and 12 in combination.

Claim 15 is rejected since claim 15 recites an apparatus that contains substantially the same limitations as recited in claim 1.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

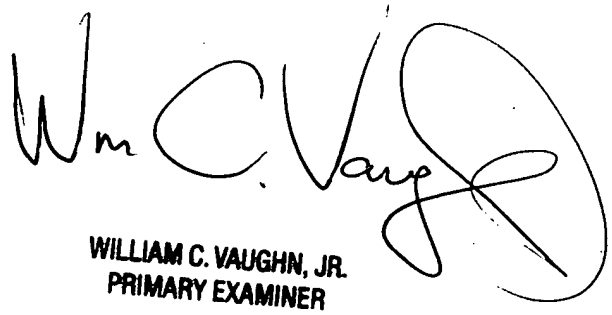
Any inquiry concerning this communication or earlier communications from the examiner should be directed to George C. Neurauter, Jr. whose telephone number is (571) 272-3918. The examiner can normally be reached on Monday through Friday from 9AM to 5:30PM Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on (571) 272-3923. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gcn



WILLIAM C. VAUGHN, JR.
PRIMARY EXAMINER